

REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the present amendment and the following discussion is respectfully requested.

Claims 1-7 are presently pending in this case. Claims 1, 3, 5, and 7 are amended by the present amendment. As amended Claims 1, 3, 5, and 7 are supported by the original disclosure,¹ no new matter is added.

In the outstanding Official Action, Claims 1-7 were rejected under 35 U.S.C. §103(a) as unpatentable over Itoh et al. (U.S. Patent Application Publication No. 20060205358, hereinafter “Itoh”) in view of Alastalo (U.S. Patent No. 6,721,302).

The outstanding rejection is respectfully traversed.

Amended Claim 1 recites in part:

establishing a list of available modulation schemes, each modulation scheme having an available transmission block size;

detecting a channel quality between the base station and the mobile station;

detecting the amount of data buffered in a transmission buffer of a sender; and

determining a modulation scheme to be used in the packet communications based on the channel quality and the buffered data amount, said determining including determining the modulation scheme by *selecting a modulation scheme from the list using a smallest available transmission block size that is greater than or equal to the amount of data buffered.*

The outstanding Office Action cited control unit 22 of Itoh as describing “a modulation scheme determination unit” as recited in Claim 3.² However, the outstanding office action conceded that Itoh does not disclose determining the modulation scheme by selecting a modulation scheme using a smallest available transmission block size that is greater than or equal to the amount of data buffered, and cited Alastalo as describing this

¹See, e.g., the specification at page 8, line 30 to page 9, line 19 and Figure 2.

²See the outstanding Office Action at page 3, lines 11-14.

feature.³ However, the cited portion of Alastalo, column 3, lines 38-43, only describes that the modulation rate can be selected to “help reduce the amount of padding.” There is no teaching or suggestion to establish a list of available modulation schemes each with an available transmission block size, much less selecting a modulation scheme from the list using a smallest available transmission block size that is greater than or equal to the amount of data buffered. Consequently, it is respectfully submitted that neither Itoh nor Alastalo teach or suggest “establishing a list” and “determining a modulation scheme” as defined in amended Claim 1. Consequently, Claim 1 (and Claim 2 dependent therefrom) is patentable over Itoh in view of Alastalo.

Claims 3 and 5 recite in part:

a modulation scheme listing unit configured to establish a list of available modulation schemes, each modulation scheme having an available transmission block size;

a channel quality detecting unit configured to detect a channel quality between the base station and the mobile station;

a buffered data monitoring unit configured to monitor the amount of data buffered in a transmission buffer of the mobile station; and

a modulation scheme determination unit configured to determine a modulation scheme for the packet communications based on the channel quality and the buffered data amount in the transmission buffer, said modulation scheme determination unit configured to determine the modulation scheme by *selecting a modulation scheme from the list using a smallest available transmission block size that is greater than or equal to the amount of data buffered.*

As noted above, neither Itoh nor Alastalo teach or suggest any element configured to establish a list of available modulation schemes each with an available transmission block size, much less any element configured to select a modulation scheme from the list using a smallest available transmission block size that is greater than or equal to the amount of data buffered. Consequently, it is respectfully submitted that neither Itoh nor Alastalo teach or

³See the outstanding Office Action at page 3, line 15 to page 4, line 3.

suggest “a modulation scheme listing unit” and “a modulation scheme determination unit” as defined in amended Claims 3 and 5. Consequently, Claims 3 and 5 (and Claim 4 and 6 dependent therefrom) are also patentable over Itoh in view of Alastalo.

Finally, amended Claim 7 recites in part:

causing a sender to establish a list of available modulation schemes, each modulation scheme having an available transmission block size;
causing the sender to detect a channel quality between the base station and the mobile station;
causing the sender to detect the amount of data buffered in a transmission buffer of the sender; and
causing the sender to determine a modulation scheme for the packet communications based on the channel quality and the data amount in the transmission buffer of the sender, said determining including determining the modulation scheme by *selecting a modulation scheme from the list using a smallest available transmission block size that is greater than or equal to the amount of data buffered*.

As noted above, neither Itoh nor Alastalo teach or suggest establishing a list of available modulation schemes each with an available transmission block size, much less selecting a modulation scheme from the list using a smallest available transmission block size that is greater than or equal to the amount of data buffered. Consequently, it is respectfully submitted that neither Itoh nor Alastalo teach or suggest “causing a sender to establish a list” and “causing the sender to determine a modulation scheme” as defined in amended Claim 7. Consequently, Claim 7 is also patentable over Itoh in view of Alastalo.

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Accordingly, the pending claims are believed to be in condition for formal allowance.

An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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